US ERA ARCHIVE DOCUMENT

CATALOG DOCUMENTATION NATIONAL COASTAL ASSESSMENT- NORTHEAST DATABASE YEAR 2000 STATIONS CRAB AND LOBSTER DATA; "CRAB LOB"

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1. DATASET IDENTIFICATION

- 1.1 Title of Catalog document National Coastal Assessment-Northeast Region Database Year 2000 Stations Crab and Lobster size data
- 1.2 Authors of the Catalog entry
 John Kiddon, U.S. EPA NHEERL-AED
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- 1.3 Catalog revision date
 December 29, 2003
- 1.4 Dataset name CRAB_LOB
- 1.5 Task Group
 National Coastal Assessment-Northeast
- 1.6 Data Set Identification Code
 012
- 1.7 Version 001
- 1.8 Request for Acknowledgment

EMAP requests that all individuals who download EMAP data acknowledge the source of these data in any reports, papers, or presentations. If you publish these data, please include a statement similar to: "Some or all of the data described in this article were produced by the U. S. Environmental

Protection Agency through its Environmental Monitoring and Assessment Program (EMAP)".

- 2. INVESTIGATOR INFORMATION (for full addresses see Section 13)
 - 2.1 Principal Investigators
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 - 2.2 Sample Collection Investigators Donald Cobb, U.S. EPA NHEERL-AED
 - 2.3 Sample Processing Investigators
 Not Applicable

3. DATASET ABSTRACT

station.

3.1 Abstract of the Dataset
The CRAB_LOB data file contains the common name, abundance, and carapace
width (mm) of up to the approximately 30 crab or lobster caught in a
standard trawl at a station. Scientific (Latin) names for the fish taxa can
be found in the FISH TAX table. One record is presented per taxa at a

3.2 Keywords for the Data Set Crab lobster abundance

4. OBJECTIVES AND INTRODUCTION

4.1 Program Objective

The National Coastal Assessment (NCA) is a national monitoring and assessment program with the primary goal of providing a consistent evaluation of the estuarine condition in U.S. estuaries. It is an initiative of the Environmental Monitoring and Assessment Program (EMAP), and is a partnership of several federal and state environmental agencies, including: EPA's Regions, Office of Research and Development, and Office of Water; state environmental protection agencies in the 24 marine coastal states and Puerto Rico; and the United States Geological Survey (USGS) and the National Oceanic and Atmospheric Agency (NOAA). The five-year NCA program was initiated in 2000, and is also known as the Coastal 2000 Program.

Stations were randomly selected using EMAP's probabilistic sampling framework and were sampled once during a summer index period (June to October). A consistent suite of indicators was used to measure conditions in the water, sediment, and in benthic and fish communities. The measured data may be used by the states to meet their reporting requirements under the Clean Water Act, Section 305(b). The data will also be used to generate

a series of national reports characterizing the condition of the Nation's estuaries.

4.2 Data Set Objective

The objective of the $CRAB_LOB$ is to record the size of crustaceans caught at NCA stations.

4.3 Background Discussion

A two-year sampling design was employed for $2000-2001\ \text{NCA}$ program in the Northeast. Analysts may therefore wish to consider the two years of data together.

The following Table indicates the number of fish trawls conducted in 2000 and 2001 by the state cooperatives (ST_COOP) in the northeastern states. Note that not all cooperatives conducted fish surveys in both seasons. Maine did not conduct trawls in either year; rather purchased lobster caught in designated estuaries in 2000.

Count of STATION	YEAR		
ST_COOP	2000	2001	Grand Total
ME			
NH	23	23	4 6
MA-FSH	28		28
RI	2		2
RI-FSH	10		10
CT	9		9
CT-FSH	19	12	31
NY	12	29	41
NJ-C	30	38	68
NJ-DB	35	35	70
DE	14	13	27
Total	182	150	332

^{*} Lobster collected only

The information collected in the fish surveys are reported in five data files. FTRAWL presents information regarding fish trawls and abundance of unique species per standard trawl. FISH_CNT contains the number of fish per species per standard trawl. FISH_LEN specifies fork length of individual fish and the frequency and location of pathologies observed in a ship-board inspection. CRAB_LOB presents size data for crustaceans caught in standard trawls. TISSCHEM reports the concentrations of about 75 chemical analytes measured in composites samples of fish, lobsters or crabs collected at a station. The lookup table FISH_TAX lists the common and scientific names of all fish identified in standard trawls.

The CRAB_LOB file reports the carapace widths of the first 30 (or so) Blue Crab or American Lobster caught in a standard trawl. (Horseshoe Crabs were also captured for $ST_COOP = CT$ and CT_FSH .) FSEQNUM is a sequence number identifying individuals of a species at a station. The sex of the organism is reported only for sampling managed by $ST_COOP = NY$.

NCA planners provide two alternate locations for a station location in the event that the original location cannot be sampled. The parameter STA_ALT indicates whether the station location was the original site, first alternate, or second alternate—STA_ALT = "A", "B", or "C", respectively. Also refer to discussion in the STATIONS metadata file regarding use of this parameter during analysis of the data.

4.4 Summary of Data Set Parameters

* denotes parameters that should be used as key fields when merging data files

*STATION Station identifier

*STAT_ALT Station Location (A,B or C)

*EVNTDATE Date of sampling event

FCOMNAME Taxa Common Name
FSEQNUM Sequence Number
C_WIDTH Carapace Width (mm)

SEX Sex of Animal

5. DATA ACQUISITION AND PROCESSING METHODS

5.1 Data Acquisition / Field Sampling

The sample collection methods used by USEPA trained field crews will be described here. NCA Standard trawls are identified by TRWLTYPE=NCA. Any significant variations by other NCA partners are noted in Section 5.1.12.

5.1.1 Sampling Objective

To collect a representative sample of fish at a station using a standard trawl. Additional nonstandard trawls were conducted when necessary to collect enough fish for chemical analyses.

5.1.2 Sample Collection and Ship-Board Processing: Methods Summary The EPA standard fish trawl was conducted using a funnel-shaped net that filters fish from the near bottom waters. Fish were herded into the net by ground wire and an overhanging panel. Standard trawls were 10 ± 2 minutes in duration with a towing speed of 2-3 knots through the water against the prevailing current (1-3 knots relative to the bottom). An auxiliary, nonstandard trawl was performed to collect fish for tissue chemistry samples if an insufficient quantity were obtained in the standard trawl. Fish from the auxiliary trawls were used for chemical analyses only, and were not included in the standardized survey counts used to characterize the fish community structure.

All fish caught in a standard trawl were counted on board ship and immediately identified using the scientific and common names listed in the FTAXON file. Fork lengths (carapace widths for crabs and lobster) in mm were measured on approximately the first 30 individuals of each species found at a station. A visual inspection for obvious signs of pathology was conducted on all fish measured for length. A subset of fish, crabs, or lobster were randomly chosen for chemical analysis. These

test organisms were tagged and frozen individually, then combined into groups of 2--10 organisms of same species for later processing as composite samples. Each group was assigned a composite ID (SAMPLEID) and sent to the analytical lab for chemical analysis.

- 5.1.3 Beginning Sampling Date
 7 July 2000
- 5.1.4 Ending Sampling Date 20 October 2000
- 5.1.5 Sampling Platform

All program partners collected samples from various gasoline or diesel powered boats, 25 to 27 feet in length.

5.1.6 Sampling Equipment

The trawl net consisted of a funnel-shaped high-rise sampling trawl. The net includes a 16 meter tow line, a chain sweep, 5 cm mesh wings, and a 2.5 cm cod end.

- 5.1.7 Manufacturer of Sampling Equipment Not applicable
- 5.1.8 Key Variables
 Not applicable
- 5.1.9 Sample Collection: Calibration

 The sampling gear does not require calibration.
- 5.1.10 Sample Collection: Quality Control

A trawl was considered void if one or more of the following conditions occurred:

- 1. Trawl could not be completed because of boat malfunction, vessel traffic, or major disruption of gear
- 2. Boat speed exceeded the prescribed range
- 3. The cod-end became untied
- 4. The net was filled with mud or debris
- 5. A portion of the catch was lost prior to processing
- 6. The tow lines became separated
- 7. The net was torn in a way that significantly altered net efficiency

If a successful trawl could not be performed within $1\frac{1}{2}$ hours, the site was considered unsampleable. Quality assurance audits were performed to verify the identification and measurement techniques of the field crew.

- 5.1.11 Sample Collection: References Strobel, C.J. 2000. Coastal 2000-Northeast Component: Field Operations Manual U. S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division, Narragansett, RI. EPA/620/R-00/002.
- 5.1.12 Sample Collection: Alternate Methods

Trawl records with the following Trawl Codes did not follow NCA standards.

TRLTYPE	Name	Description		
CT	Connecticut Fish Survey Trawl	30 minutes standard		
RI	Rhode Island Fish Survey Trawl	20 minutes standard		
MA	MA Fish Survey Trawl (2000 only)	20 minutes standard		
NH	New Hampshire modified Standard	4 minutes standard		

- 5.2 Data Preparation and Sample Processing All parameters reported in this file were measured aboard ship immediately following the trawl (see Section 5.1).
 - 5.2.1 Sample Processing Objective Not applicable
 - 5.2.2 Sample Processing: Methods Summary
 Not applicable
 - 5.2.3 Sample Processing: Calibration
 Not applicable
 - 5.2.4 Sample Processing: Quality Control
 Not applicable
 - 5.2.5 Sample Processing: References Not applicable
 - 5.2.6 Sample Processing: Alternate Methods Not applicable
- 6. DATA ANALYSIS AND MANIPULATIONS
 - 6.1 Name of New or Modified Values Not applicable
 - 6.2 Data Manipulation Description Not applicable
- 7. DATA DESCRIPTION
 - 7.1 Description of Parameters
 - 7.1.1 Components of the Data Set

NAME	TYPE	LENGTH	LABEL	
STATION	Char	9	Station	Identifier
STAT_ALT	Char	1	Station	Location
EVNTDATE	Num	8	Date of	Sampling

FCOMNAME	Char	30	Fish Taxa Common
FSEQNUM	Num	4	Fish Sequence Number
SEX	Char	8	Sex of Animal
C WIDTH	Num	4	Carapace Width (mm)

7.1.2 Precision of Reported Values
As displayed in Section 7.1.3 and 7.1.4.

7.1.3 Minimum Value in Data set

Variable Minimum Value

FSEQNUM 1 C_WIDTH 37

7.1.4 Maximum Value in Data set

Variable Maximum Value

FSEQNUM 34 C_WIDTH 305

7.2 Data Record Example

STATION	STAT_ALT	EVNTDATE	FCOMNAME	FSEQNUM	SEX	C_WIDTH
CT00-0001	А	8/17/00	BLUE CRAB		1	52
CT00-0001	A	8/17/00	BLUE CRAB		2	5 9
CT00-0009	А	8/31/00	BLUE CRAB		1	110
CT00-0011	В	9/1/00	AMERICAN LOBSTER		1	80
CT00-0011	В	9/1/00	AMERICAN LOBSTER		2	79

8. GEOGRAPHIC AND SPATIAL INFORMATION

- 8.1 Minimum Longitude (Westernmost) -75.7737 decimal degrees
- 8.2 Maximum Longitude (Easternmost)
 -67.0939 decimal degrees
- 8.3 Minimum Latitude (Southernmost)
 38.4521 decimal degrees
- 8.4 Maximum Latitude (Northernmost) 44.9456 decimal degrees
- 8.5 Name of area or region $\hbox{The National Coastal Assessment Northeast Region covers the northeastern US coastline from Maine to Delaware. }$

- 9. QUALITY CONTROL AND QUALITY ASSURANCE
 - 9.1 Measurement Quality Objectives
 - 9.2 Data Quality Assurance Procedures Inspection of the sampling gear for tears or improper assemblage is done at the beginning of every trawl event.
- 10. DATA ACCESS
 - 10.1 Data Access Procedures
 Data can be downloaded from the web
 http://www.epa.gov/emap/nca/html/regions/index.html
 - 10.2 Data Access Restrictions
 None
 - 10.3 Data Access Contact Persons
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- 10.4 Dataset Format
 ASCII (CSV) and SAS Export files
- 10.5 Information Concerning Anonymous FTP
 Not available
- 10.6 Information Concerning WWW
 No gopher access, see Section 10.1 for WWW access
- 10.7 EMAP CD-ROM Containing the Dataset Data not available on CD-ROM
- 11. REFERENCES

Strobel, C.J. 2000. Environmental Monitoring and Assessment Program: Coastal 2000 - Northeast component: field operations manual. Narragansett (RI): U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Atlantic Ecology Division. EPA/620/R-00/002. 68 p.

U.S. EPA. 2001. National Coastal Assessment: Field Operations Manual. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/003. 72 p.

U.S. EPA. 2001. Environmental Monitoring and Assessment Program (EMAP): National Coastal Assessment Quality Assurance Project Plan 2001-2004. U.S. Environmental Protection Agency, Office of Research and Development, National Health and Environmental Effects Research Laboratory, Gulf Ecology Division, Gulf Breeze, FL. EPA/620/R-01/002. 189 p.

12. TABLE OF ACRONYMS

AED Atlantic Ecology Division

DE Delaware

CSC Computer Sciences Corporation

CT Connecticut

EMAP Environmental Monitoring and Assessment Program

EPA Environmental Protection Agency

MA Massachusetts

ME Maine

mm Millimeters

NCA National Coastal Assessment

NH New Hampshire

NHEERL National Health and Environmental Effects Research Laboratory

NJ New Jersey
NY New York
NYC New York City
PA Pennsylvania

QA/QC Quality Assurance/Quality Control

RI Rhode Island

UNH University of New Hampshire

WWW World Wide Web

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